

WHAT IS CLAIMED IS:

1. A photothermographic material comprising a support having disposed thereon an image-forming layer that contains at least a non-photosensitive organic silver salt, a photosensitive silver halide, a reducing agent and a binder, and the material further comprising a compound represented by the following formula (I):



wherein A represents an atomic group having at least two mercapto groups as the substituent; W represents a divalent linking group; n represents 0 or 1; and P represents a pyrazolidone group.

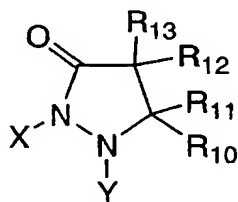
2. The photothermographic material according to claim 1, wherein the atomic group is a group selected from the group consisting of an alkyl group, an aryl group and a heterocyclic group.

3. The photothermographic material according to claim 1, wherein the atomic group is a heterocyclic group.

4. The photothermographic material according to claim 1, wherein the atomic group is an aromatic nitrogen-containing heterocyclic group.

5. The photothermographic material according to claim 2, wherein the atomic group is an aromatic nitrogen-containing heterocyclic group.

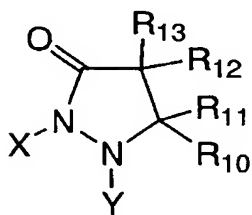
6. The photothermographic material according to claim 1, wherein the pyrazolidone group is a group obtained by removing a hydrogen atom from a compound represented by the following formula (P-2):



Formula (P-2)

wherein Y represents a hydrogen atom, an alkyl group, an aryl group or a heterocyclic group; X represents a hydrogen atom, an alkyl group, an acyl group, a carbamoyl group, an alkoxycarbonyl group, an alkylsulfonyl group or an arylsulfonyl group; R₁₀, R₁₁, R₁₂ and R₁₃ each represent a hydrogen atom or a substituent; and wherein at least one of Y, X, R₁₀, R₁₁, R₁₂ and R₁₃ is a hydrogen atom.

7. The photothermographic material according to claim 2, wherein the pyrazolidone group is a group obtained by removing a hydrogen atom from a compound represented by the following formula (P-2):



Formula (P-2)

wherein Y represents a hydrogen atom, an alkyl group, an aryl group or a heterocyclic group; X represents a hydrogen atom, an alkyl

group, an acyl group, a carbamoyl group, an alkoxycarbonyl group, an alkylsulfonyl group or an arylsulfonyl group; R_{10} , R_{11} , R_{12} and R_{13} each represent a hydrogen atom or a substituent; and wherein at least one of Y, X, R_{10} , R_{11} , R_{12} and R_{13} is a hydrogen atom.

8. The photothermographic material according to claim 1, wherein the pyrazolidone group is a 1-phenyl-3-pyrazolidone group.

9. The photothermographic material according to claim 2, wherein the pyrazolidone group is a 1-phenyl-3-pyrazolidone group.

10. The photothermographic material according to claim 1, wherein the photosensitive silver halide has a silver iodide content ranging from 40% by mol to 100% by mol.

11. The photothermographic material according to claim 2, wherein the photosensitive silver halide has a silver iodide content ranging from 40% by mol to 100% by mol.

12. The photothermographic material according to claim 1, wherein the compound represented by formula (I) is added in an amount ranging from 1×10^{-6} mol to 1 mol, per mol of the photosensitive silver halide.

13. The photothermographic material according to claim 2, wherein the compound represented by formula (I) is added in an amount ranging

from 1×10^{-6} mol to 1 mol, per mol of the photosensitive silver halide.

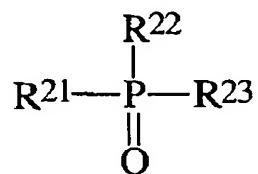
14. The photothermographic material according to claim 1, further comprising a reducing agent for an organic silver salt.

15. The photothermographic material according to claim 14, wherein the reducing agent is a hindered phenol-type reducing agent or a bisphenol-type reducing agent.

16. The photothermographic material according to claim 2, further comprising a reducing agent for an organic silver salt.

17. The photothermographic material according to claim 16, wherein the reducing agent is a hindered phenol-type reducing agent or a bisphenol-type reducing agent.

18. The photothermographic material according to claim 1, further comprising a hydrogen bond-forming compound represented by the following formula (D):

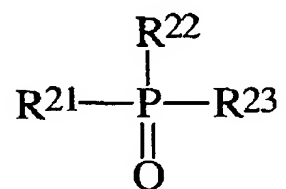


Formula (D)

wherein R^{21} , R^{22} , and R^{23} each independently represent an

optionally substituted alkyl, aryl, alkoxy, aryloxy, amino, or heterocyclic group.

19. The photothermographic material according to claim 2, further comprising a hydrogen bond-forming compound represented by the following formula (D):



Formula (D)

wherein R^{21} , R^{22} , and R^{23} each independently represent an optionally substituted alkyl, aryl, alkoxy, aryloxy, amino, or heterocyclic group.